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THE AMERICAN ASSOCIATION OF CARDIOVASCULAR AND PULMONARY REHABILITATION (AACVPR) RISK CLASSIFICATION IDENTIFIES CORONARY HEART DISEASE PATIENTS WHO ARE AT INCREASED RISK OF DEATH

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Background: The American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) recommends classifying cardiac rehabilitation (CR) participants as low, intermediate, or high risk for cardiovascular (CV) events during CR. Whether this classification predicts long-term mortality in Coronary Heart Disease (CHD) patients is unknown.

Methods: We analyzed 1,422 CHD patients entering CR from 1996-2008. We classified them as low, intermediate, or high risk by AACVPR criteria. We used the Social Security Death Index to determine vital status with complete follow-up through 12/31/08. We constructed survival curves using the Kaplan Meier (KM) method and used Cox proportional hazards modeling to determine whether AACVPR classification was independently associated with survival after adjustment for age, gender, race, and number of comorbidities at CR entry.

Results: Mean age was 61 ± 11 years, 31% were women, 35% non-white, and the mean number of comorbidities was 1.6 ± 1.6; 305 (21%) were at low risk, 515 (36%) intermediate, and 605 (42%) high. Over a mean follow-up of 5 ± 3.5 years, 275 died (19%). Of these 17 (6%) were in those at low risk, 90 (33%) in those at intermediate risk, and 168 (61%) in those at high risk (KM Curves in Figure). Compared to those at low risk, those at intermediate (adjusted HR 1.9, 95% CI 1.1-3.2) or high (adjusted HR 4.1, 95% CI 2.4-6.7) risk were at increased risk for death.

Conclusions: The AACVPR risk classification accurately identifies CHD patients at increased risk of death.

Figure. Kaplan Meier Survival Curves by American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) Risk Classification for Coronary Heart Disease Patients Entering Cardiac Rehabilitation, 1996-2008